

BookletChart™

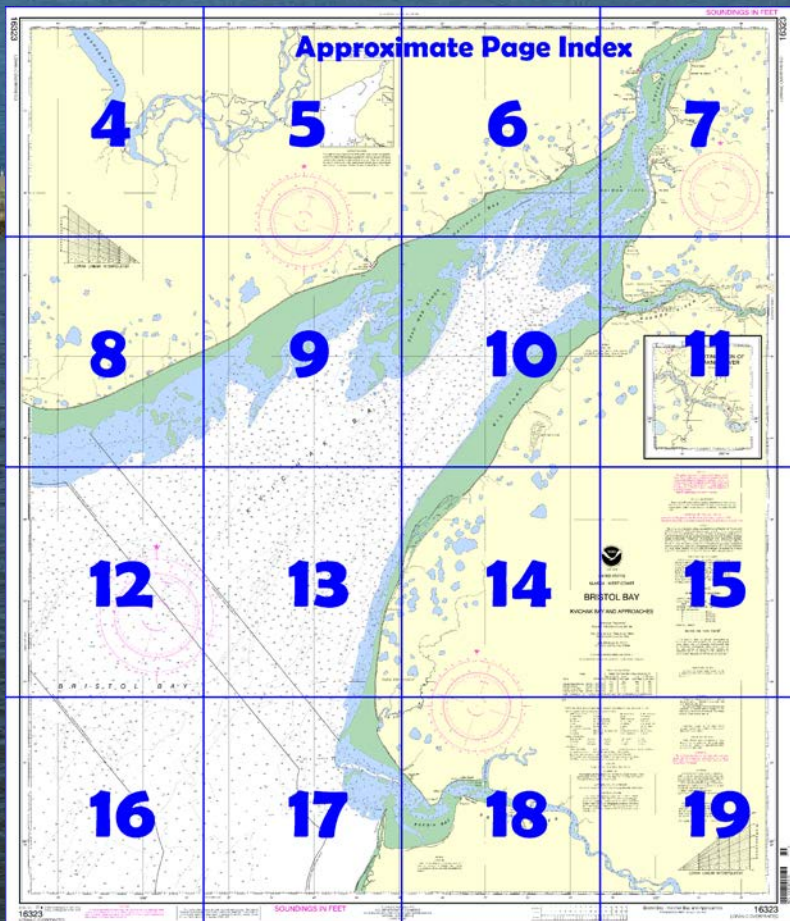


Bristol Bay – Kvichak Bay and Approaches **NOAA Chart 16323**

A reduced-scale NOAA nautical chart for small boaters
When possible, use the full-size NOAA chart for navigation.



- Complete, reduced-scale nautical chart
- Print at home for free
- Convenient size
- Up-to-date with Notices to Mariners
- Compiled by NOAA's Office of Coast Survey, the nation's chartmaker



Published by the
National Oceanic and Atmospheric Administration
National Ocean Service
Office of Coast Survey
www.NauticalCharts.NOAA.gov
888-990-NOAA

What are Nautical Charts?

Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

What is a BookletChart™?

This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. See the Note at the bottom of page 5 for the reduction in scale applied to this chart.

Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at <http://www.NauticalCharts.NOAA.gov>.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

Notice to Mariners Correction Status

This BookletChart has been updated for chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied to this chart are listed in the Note at the bottom of page 7. Coast Pilot excerpts are not being corrected.

For latest Coast Pilot excerpt visit the Office of Coast Survey website at <http://www.nauticalcharts.noaa.gov/nsd/searchbychart.php?chart=16323>.



(Selected Excerpts from Coast Pilot)

Kvichak Bay, the large arm at the head of Bristol Bay, extends NE from a line between the S entrance point of Egegik River and Etolin Point. Kvichak Bay is navigable for deep-draft vessels as far as the anchorage about 270° from the entrance to the Naknek River. The approach from the SW is restricted to a channel about 4 miles wide by **Big Flat**, an extensive tide flat extending off the E shore, and by **Dead Man Sands**, the large shoal in the middle of the bay NW

of Johnston Hill. This shoal uncovers about 8 feet, and the area N of it is very foul. Fishing boats and collecting barges use the area at half tide or

higher. Caution is necessary as a number of fishermen have been lost when trapped by the tides.

Navigators are reminded that the great range of tide in this bay must be considered when selecting an anchorage.

Currents.—In Kvichak Bay and River the current is very strong, and consequently the channel shifts more or less each year. The current velocity is 3.5 knots in the lower part of the bay and 2.5 knots in the main ship anchorage off Naknek. In Naknek River at the hole off Morakas Point, 4 miles above the entrance, the current velocities are about 1 knot on the flood and 2 knots on the ebb. (See the Tidal Current Tables for predictions.)

It is recommended that vessels anchor against the current, when it is at maximum strength, so that engines may be used to offset the sudden strain when the anchor is let go. Caution must also be exercised, on flood current, to keep the vessel from being carried beyond the anchorage area while maneuvering. Since the currents usually follow the axes of the bay channels, navigators should make ample allowance when proceeding between Kvichak and Nushagak Bays; otherwise they are apt to be set to the N or to the S when they are on an E or W course.

Egegik River empties into Kvichak Bay 30 miles N of Cape Greig; **Cape Chichagof** is the N entrance point. It is a large river, 1 mile wide at the canneries, and is the outlet of **Becharof Lake**. (See also chart 16011.) It flows in a W direction for more than 28 miles.

The lower part of the river forms **Egegik Bay**. A large part of its area is bare at low water. At the entrance, shoal water extends 6 miles offshore and should be given a wide berth by passing vessels. Entering vessels, depending upon their draft and condition of the sea, generally cross the entrance bar between half and full tide stages only. Moderately heavy seas will break over this bar with any stage of tide, although it has 4 fathoms over it at high water. It is considered the most dangerous bar in the Bristol Bay area.

Pilotage, Egegik Bay.—Pilotage, except for certain exempted vessels, is compulsory for all vessels navigating the waters of the State of Alaska. The Bering Sea is served by the Alaska Marine Pilots. (See **Pilotage, General** (indexed), chapter 3, for details.)

Naknek River enters Kvichak Bay on the E side, about 10 miles S of Koggiung. **Cape Suworof** is the point on the N side of the entrance. The large 60-mile-long river has its source in **Lake Naknek**.

Naknek is on the N side of the Naknek River about 1.5 miles from the mouth. A nurse is on duty during the winter, and, during the cannery season, each cannery employs a doctor whose services are available to the public for a fee. Weekly mail service is by plane throughout the year. Regular scheduled steamers also carry mail during the summer. A road leads 0.8 mile inland to a lake used as a landing place for floatplanes; another road goes about 12 miles SE to **King Salmon Airport**.

Transportation over land in this area is entirely by plane. Several floatplanes at the inland lake are available for hire or charter. The airport has scheduled freight and passenger service to Anchorage. There is a telephone line from Naknek to the airport. **South Naknek** is on the S side of the Naknek River, directly across from Naknek.

Pilotage, Naknek.—Pilotage, except for certain exempted vessels, is compulsory for all vessels navigating the waters of the State of Alaska. The Bering Sea is served by the Alaska Marine Pilots and Southwest Alaska Pilots Association. (See **Pilotage, General** (indexed), chapter 3, for the pilot pickup stations and other details.)

U.S. Coast Guard Rescue Coordination Center 24 hour Regional Contact for Emergencies

RCC Juneau	Commander	
	17th CG District	(907) 463-2000
	Juneau, Alaska	

Table of Selected Chart Notes

Corrected through NM Oct.

HEIGHTS

Heights in feet above Mean High Water.

CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

NOTE C

CAUTION

Shoaling has been reported in the entrance channels to Kvichak River. Local knowledge should be used when navigating the area.

RADAR REFLECTORS

Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

CAUTION

Limitations on the use of radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Imagery and Mapping Agency Publication 117.

Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.

Station positions are shown thus:
○ (Accurate location) o (Approximate location)

NOTE B

CAUTION

Extensive shoaling has been reported in the entrance channel to Egegik Bay. Local knowledge should be used when navigating the channel.

Underlined figures on the areas which uncover express the heights in feet above datum of the soundings.

AIDS TO NAVIGATION

Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.

Mercator Projection
Scale 1:100,000 at Lat 58° 36'

North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FEET
AT MEAN LOWER LOW WATER

LORAN-C

GENERAL EXPLANATION

LORAN-C FREQUENCY100kHz.

PULSE REPETITION INTERVAL
999099,900 Microseconds

STATION TYPE DESIGNATORS: (Not individual station letter designators)

MMaster
WSecondary
XSecondary
YSecondary
ZSecondary

EXAMPLE: 9990-Y

RATES ON THIS CHART

9990-Y 9990-Z

The Loran-C lines of position overprinted on this chart have been prepared for use with ground wave signals and are presently compensated only for theoretical propagation delays which have not yet been verified by observed data. Mariners are cautioned not to rely entirely on the lattices in in-shore waters. Skywave corrections are not provided.

WARNING

The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

HORIZONTAL DATUM

The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 2.637" southward and 7.717" westward to agree with this chart.

NOTE A

Navigation regulations are published in Chapter 2, U.S. Coast Pilot 9. Additions or revisions to Chapter 2 are published in the Notices to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 17th Coast Guard District in Juneau, Alaska, or at the Office of the District Engineer, Corps of Engineers in Anchorage, Alaska.

Refer to charted regulation section numbers

COLREGS: International Regulations for Preventing Collisions at Sea, 1972.

This nautical chart has been designed to promote safe navigation. The National Ocean Service encourages users to submit corrections, additions, or deletions to improve this chart to the Chief, Marine Chart Division (N/CS2), National Ocean Service, NOAA, Silver Spring, Maryland 20910-3282.

POLLUTION REPORTS

Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

AUTHORITIES

Hydrography and topography by the National Ocean Service, Coast and Geodetic Survey with additional data from the Corps of Engineers, Geological Survey, and U.S. Coast Guard.

NOTE X

The 12 nautical mile territorial sea was established by Presidential Proclamation 5928, December 27, 1988, and is also the outer limit of the U.S. contiguous zone for the application of domestic law. The 3 nautical mile line, previously identified as the outer limit of the territorial sea, is retained because the proclamation states that it does not alter existing State or Federal law. The 9 nautical mile natural resources boundary off Texas, the Gulf coast of Florida, and Puerto Rico, and the 3 nautical mile line elsewhere remain the inner boundary of the Federal fisheries jurisdiction and the limit of states' jurisdiction under the Submerged Lands Act (P.L. 83-31, 67 Stat. 29, March 22, 1953). These maritime limits are subject to modification, as represented on future charts. The lines shown on the most recent chart edition take precedence.

COLREGS, 80.1705 (see note A)

International Regulations for Preventing Collisions at Sea, 1972.

The entire area of this chart falls seaward of the COLREGS Demarcation Line.

ABBREVIATIONS (For complete list of Symbols and Abbreviations, see Chart No. 1.)

Aids to Navigation (lights are white unless otherwise indicated):

AERO aeronautical	G green	Mo morse code	R TR radio tower
Al alternating	Gp group	N nun	Rot rotating
B black	IQ interrupted quick	OBSC obscured	s seconds
Bn beacon	iso isophase (E Int)	Oc occulting	SEC sector
C can	LT HO lighthouse	Or orange	St M statute miles
DIA diaphone	M nautical mile	Q quick	VQ very quick
E Int equal interval (Iso)	m minutes	R red	W white
F fixed	MICRO TR microwave tower	Ra Ref radar reflector	WHIS whistle
Fl flashing	Mkr marker	R Bn radiobeacon	Y yellow

Bottom characteristics:

Blds boulders	Co coral	gy gray	Oys oysters	so soft
bk broken	G gravel	h hard	Rk rock	Sh shells
Cy clay	GrS grass	M mud	S sand	sy sticky

Miscellaneous:

AUTH authorized	Obstn obstruction	PD position doubtful	Subm submerged
ED existence doubtful	PA position approximate	Rep reported	
Z1 Wreck, rock, obstruction, or shoal swept clear to the depth indicated.			
(2) Rocks that cover and uncover, with heights in feet above datum of soundings.			

TIDAL INFORMATION

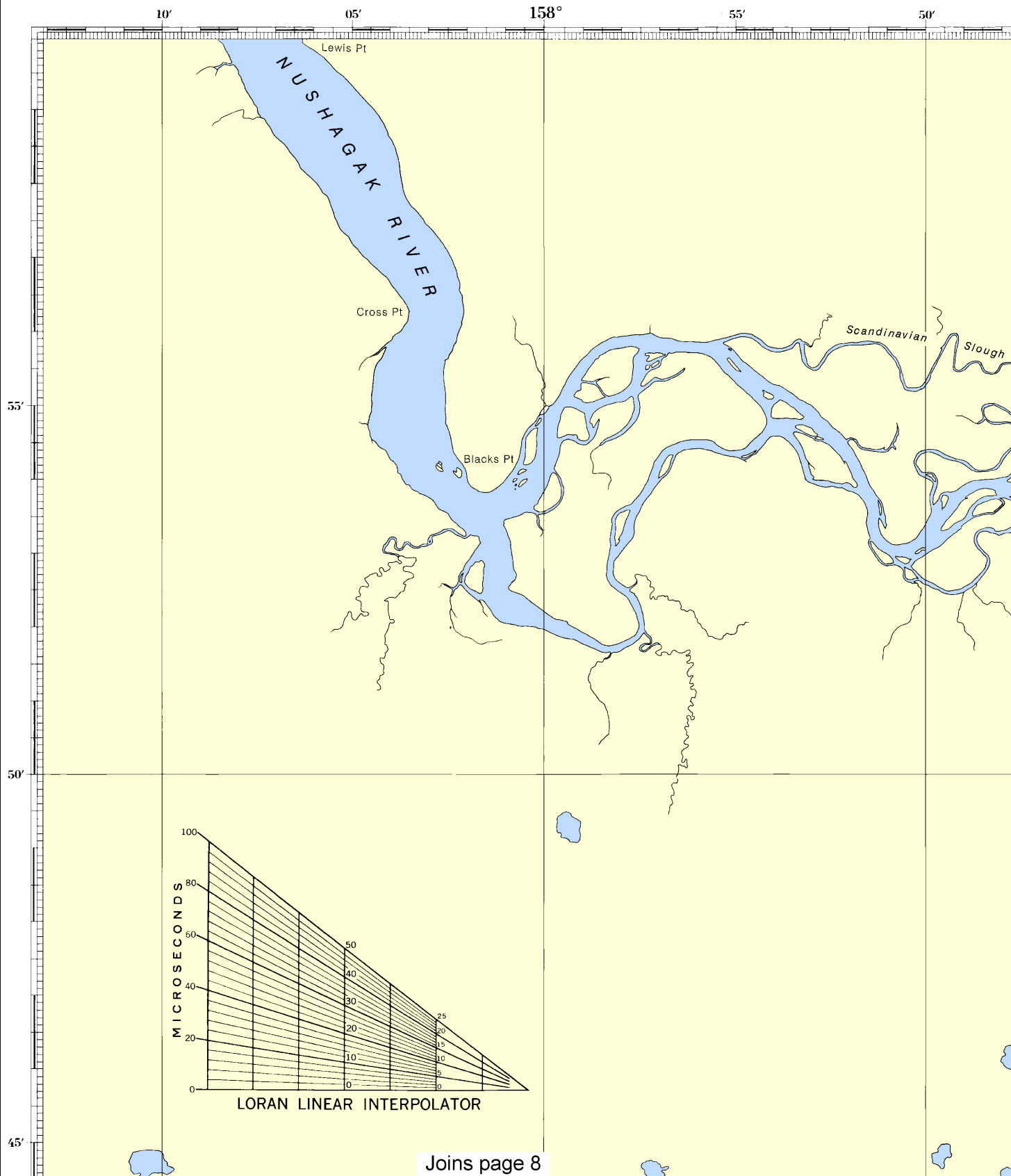
Name	Place (LAT/LONG)	Height referred to datum of soundings (MLLW)			
		Mean Higher High Water	Mean High Water	Mean Low Water	Extreme Low Water
Naknek River Entrance	(58°43'N / 157°03'W)	feet 22.6	feet 20.7	feet 2.2	feet -2.0
Naknek Air Base	(58°40'N / 156°39'W)	3.2	2.3	0.2	-3.0
Egegik, Egegik River	(58°13'N / 157°22'W)	13.3	11.6	0.8	-3.0
Kvichak, Kvichak River	(58°58'N / 156°57'W)	16.5	14.8	0.9	-3.0

Note: Currents of 3 to 4 knots or more may be encountered in Naknek and Kvichak rivers. See Tidal Current Tables, Pacific Coast of North America and Asia for predictions.

(803)

16323

LORAN-C OVERPRINTED



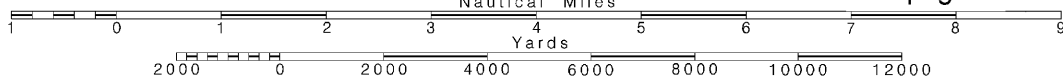
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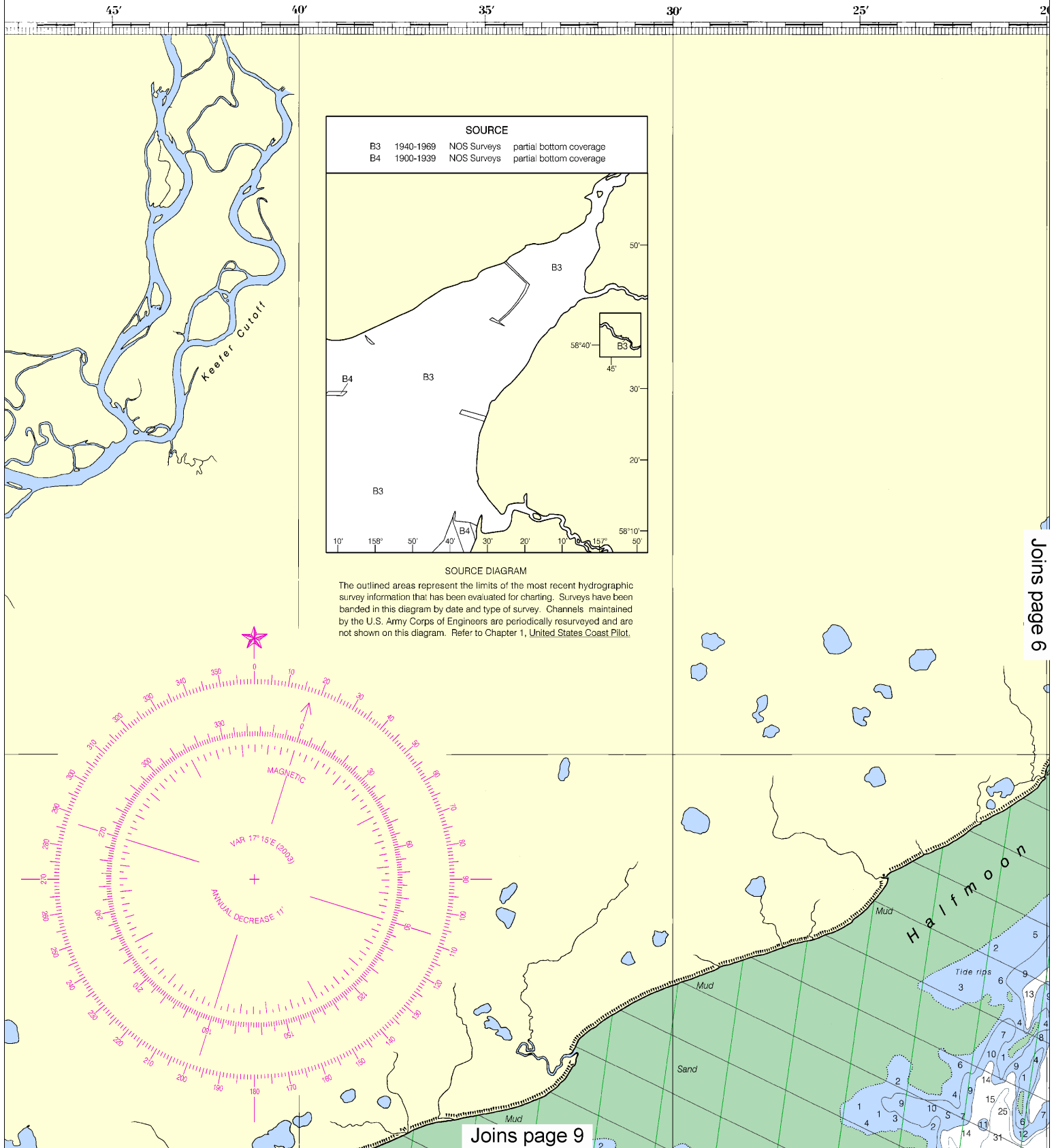
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Printed at reduced scale.

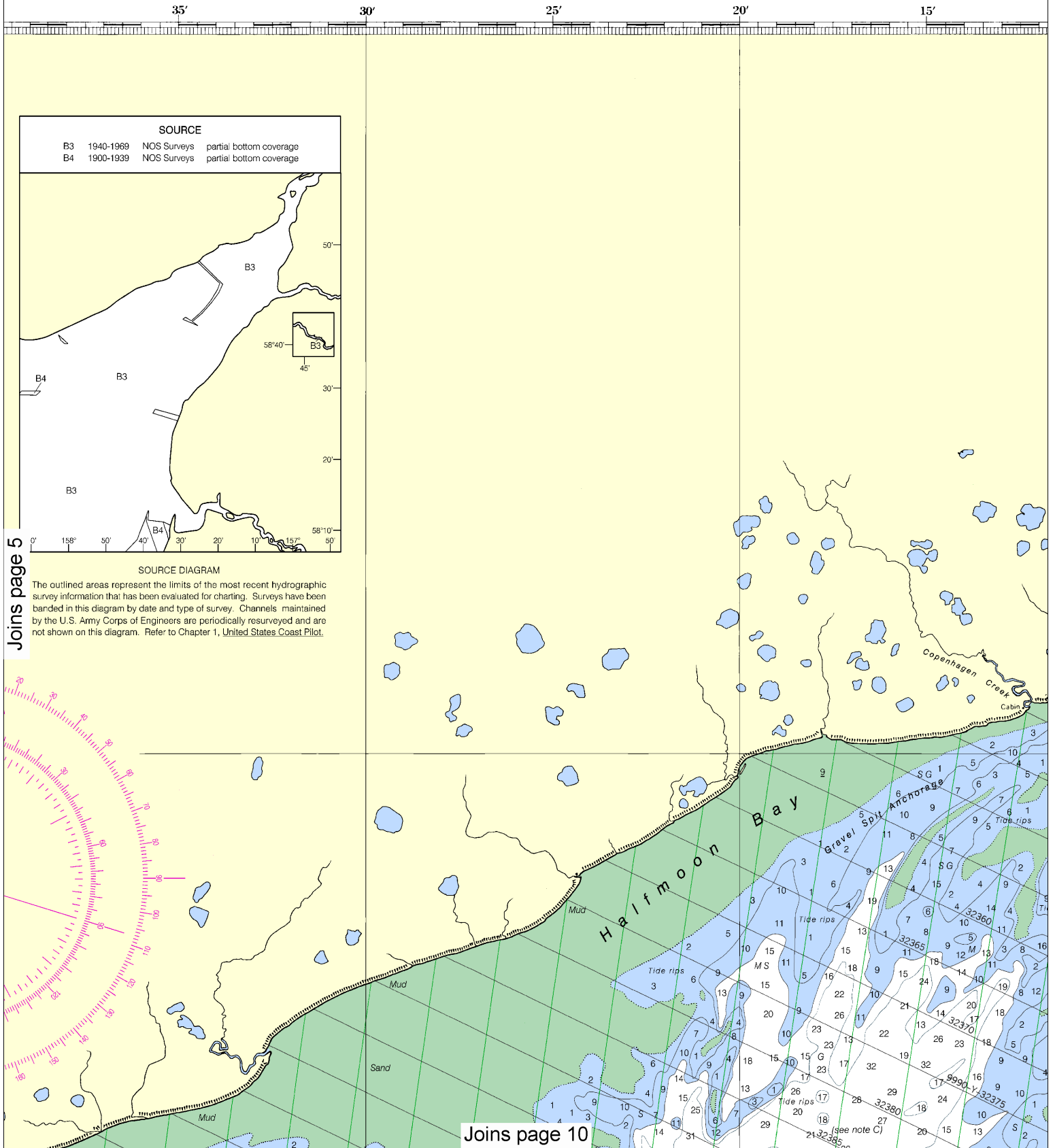
SCALE 1:100,000

See Note on page 5.





This BookletChart was reduced to 75% of the original chart scale.
 The new scale is 1:133333. Barscales have also been reduced and
 are accurate when used to measure distances in this BookletChart.



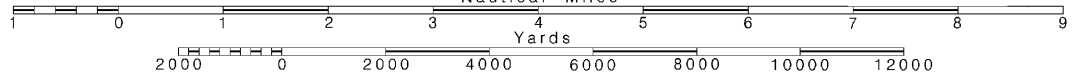
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Note: Chart grid lines are aligned with true north.

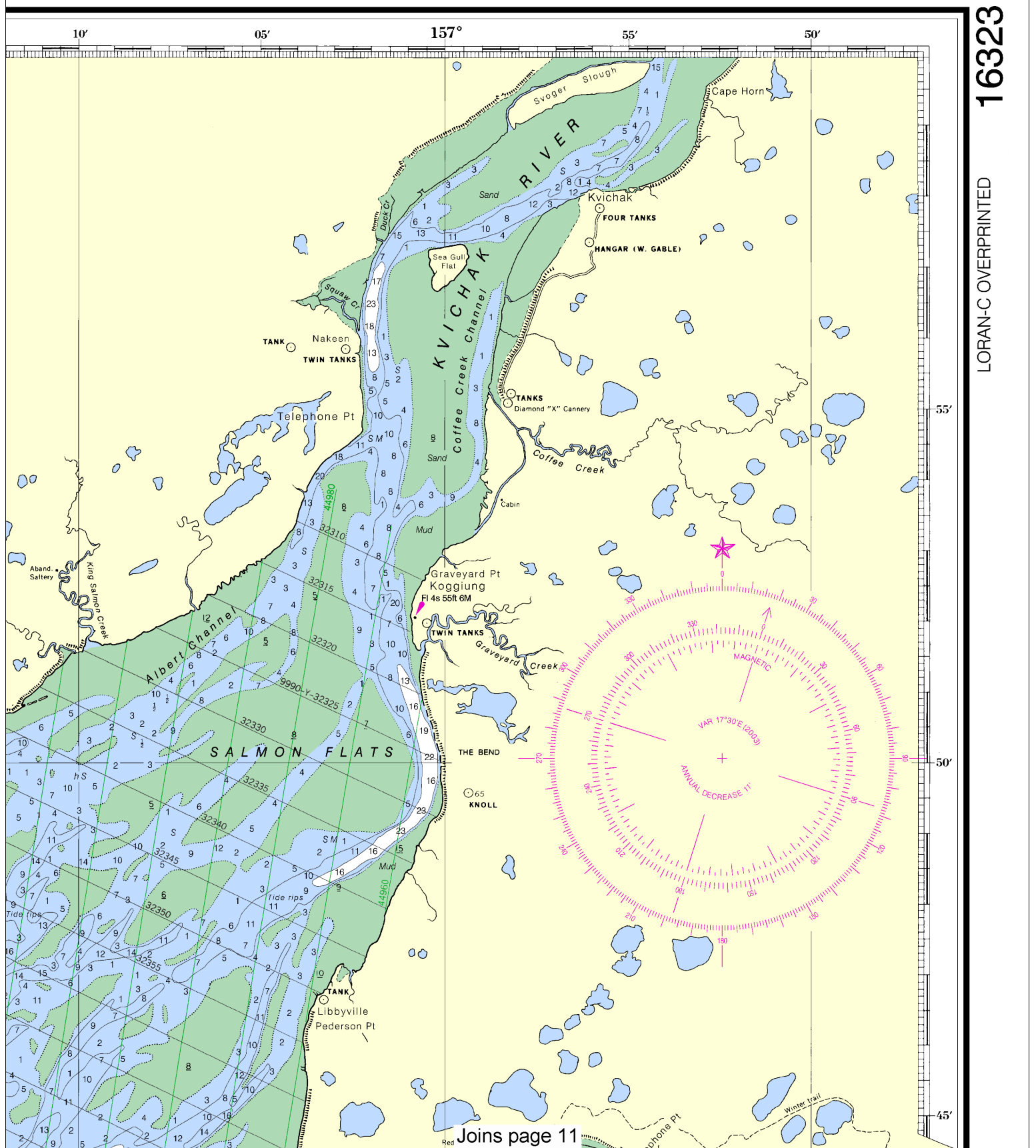
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SCALE 1:100,000
Nautical Miles

See Note on page 5.



SOUNDINGS IN FEET



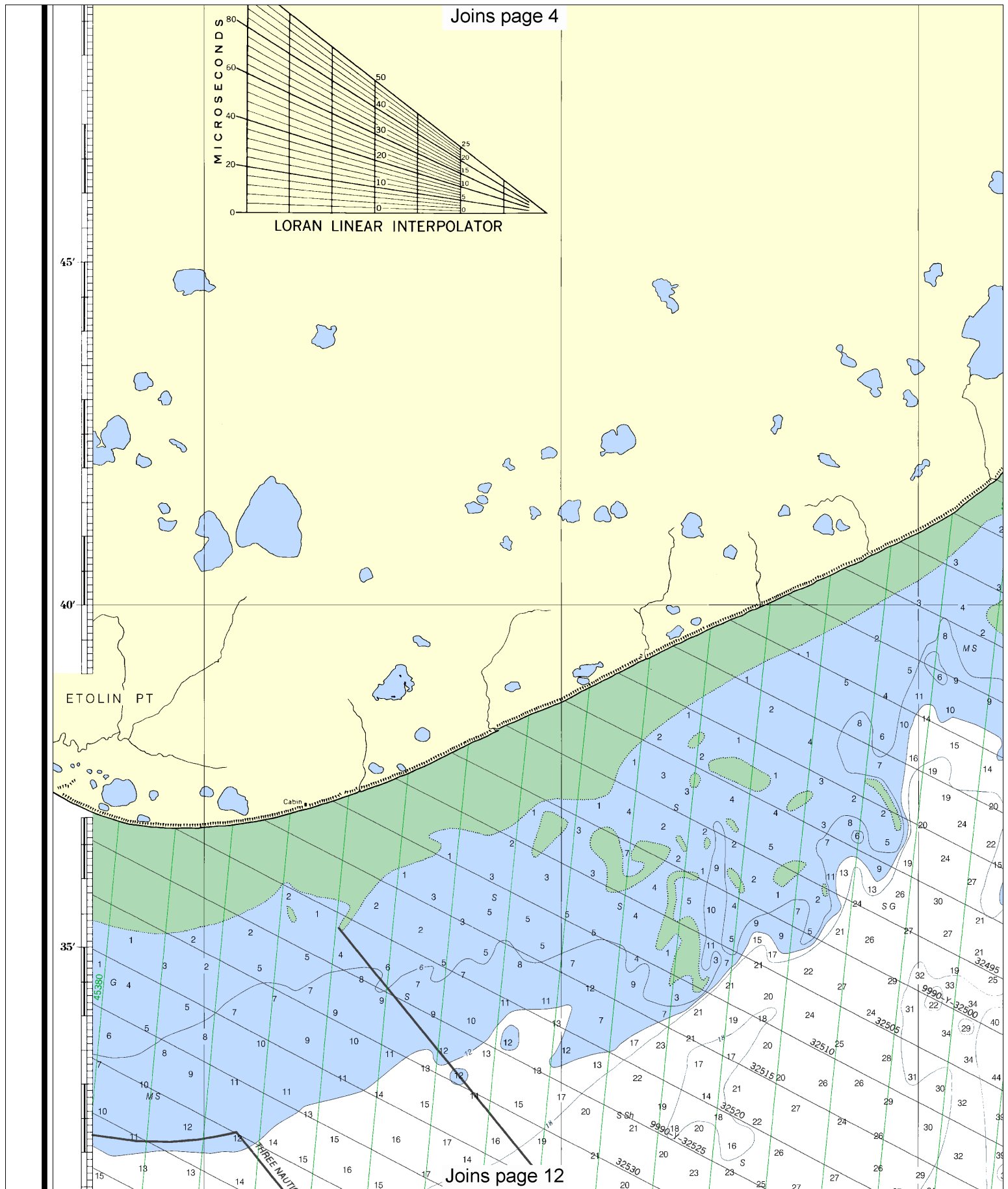
16323

LORAN-C OVERPRINTED

Joins page 11

This BookletChart has been updated through: Coast Guard Local Notice To Mariners: 4812 11/27/2012,
 NGA Weekly Notice to Mariners: 4812 12/1/2012,
 Canadian Coast Guard Notice to Mariners: 0912 9/28/2012.

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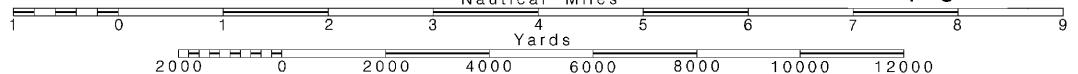
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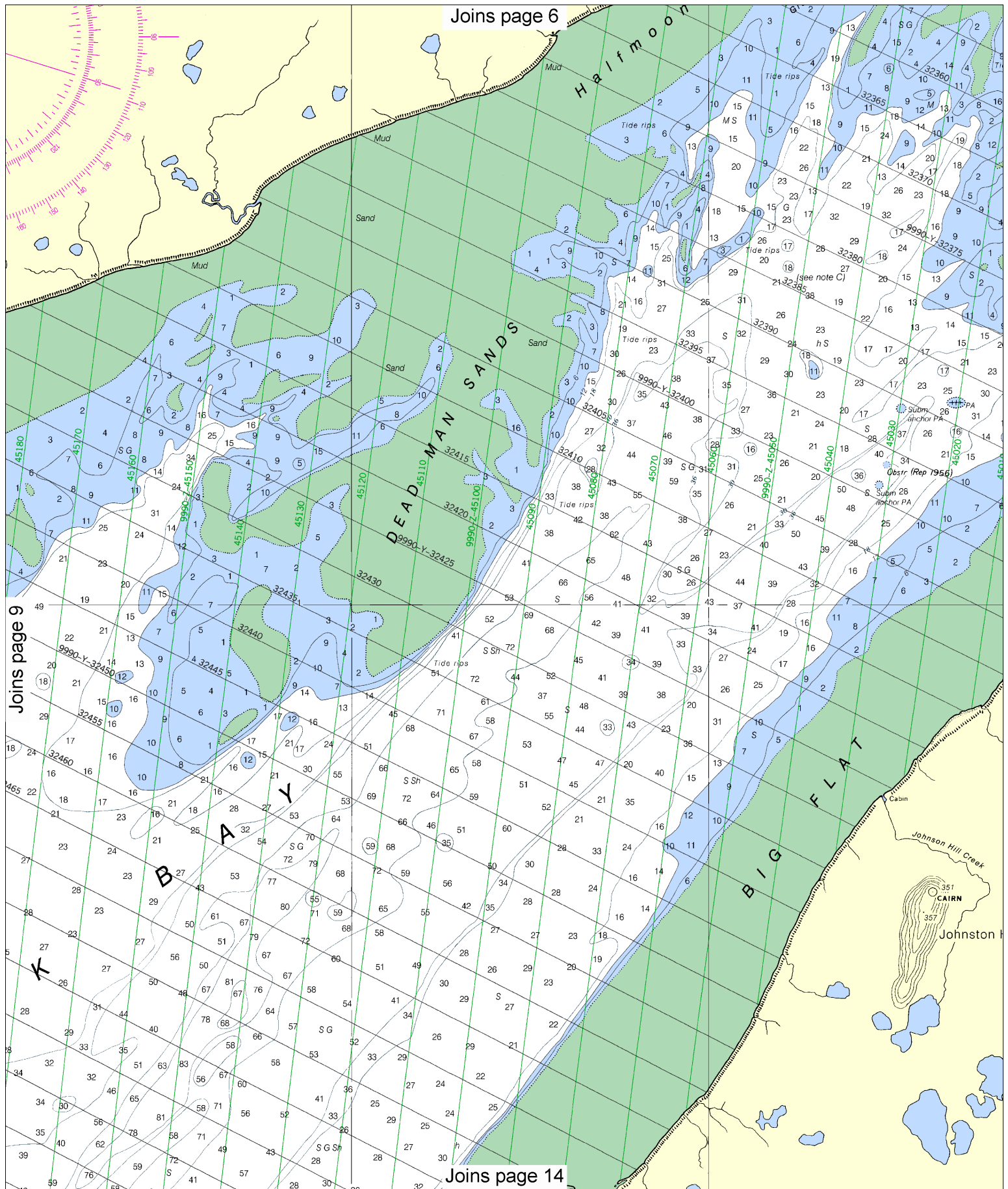
Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

SCALE 1:100,000
Nautical Miles

See Note on page 5.





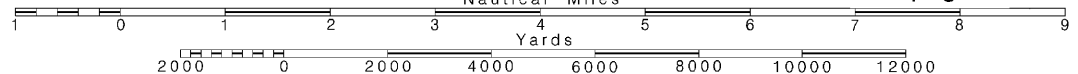
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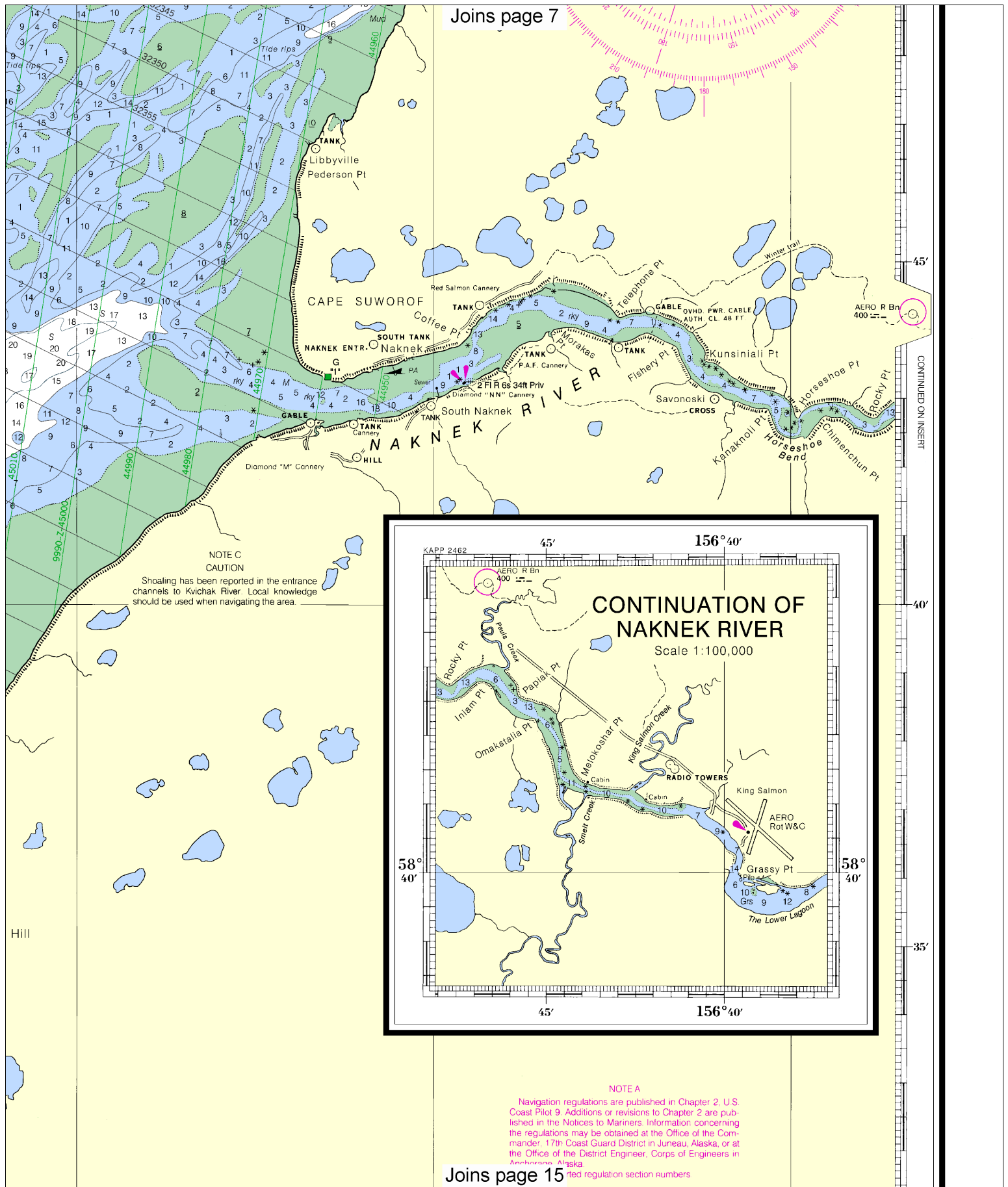
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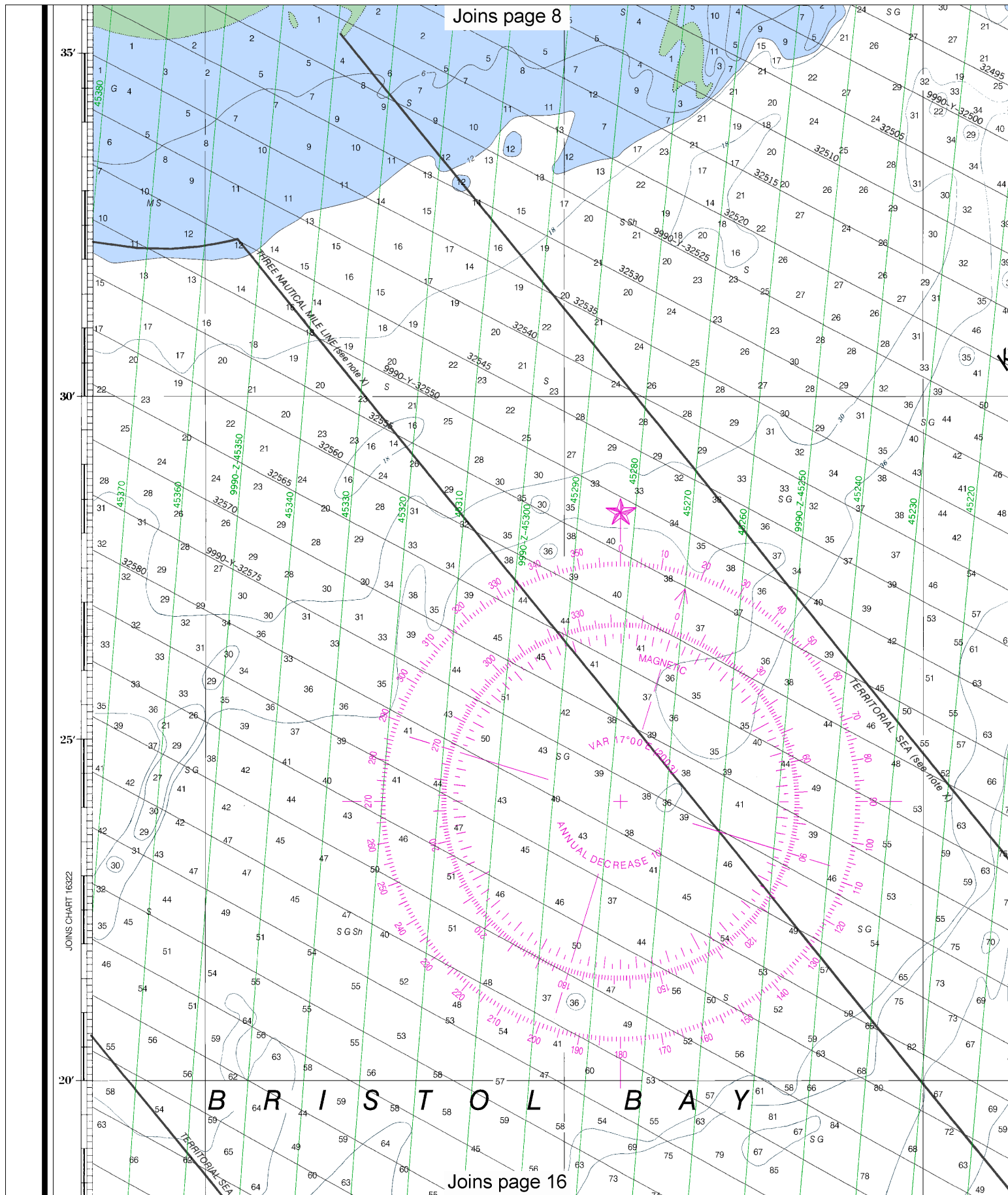
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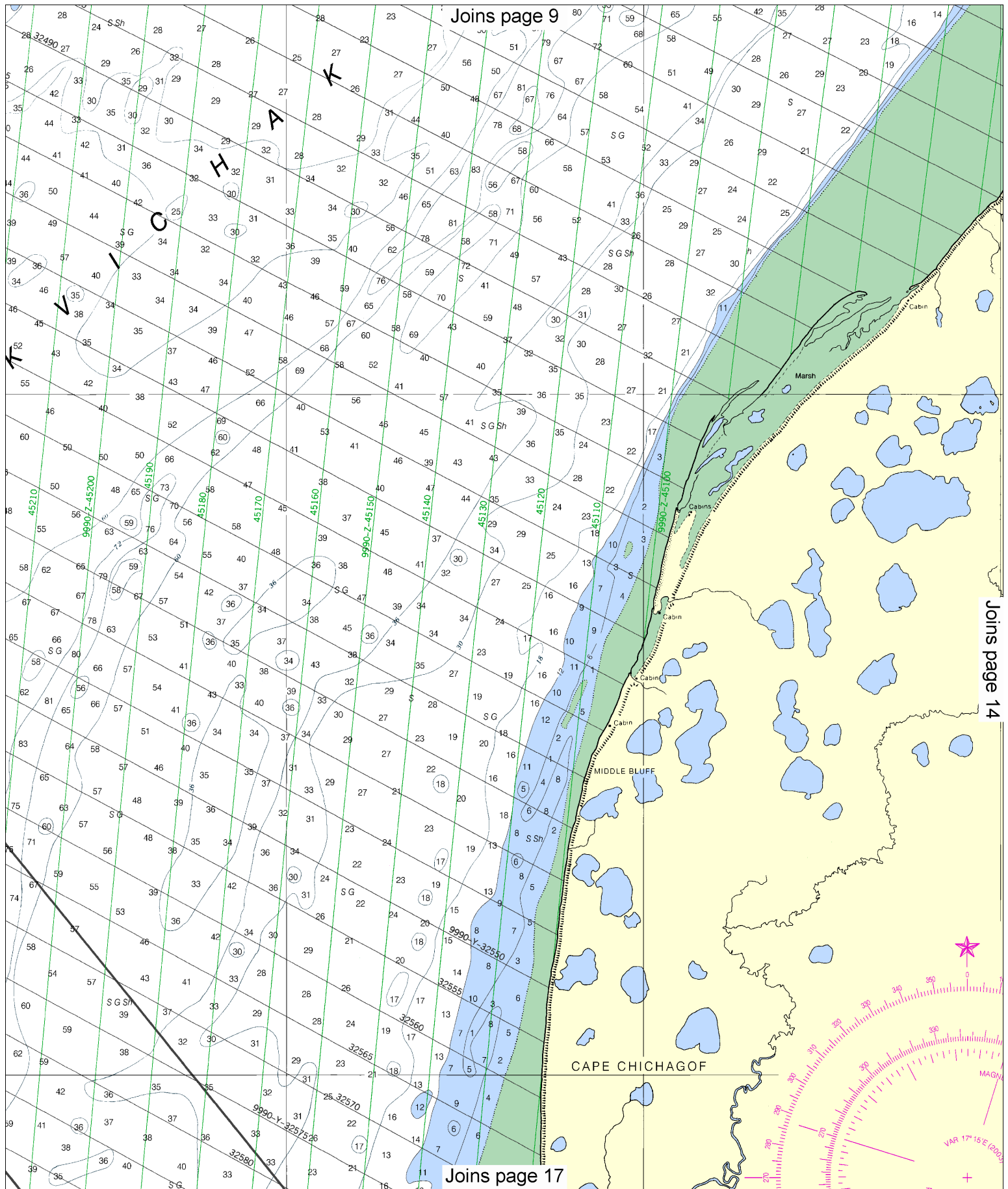
SCALE 1:100,000
Nautical Miles

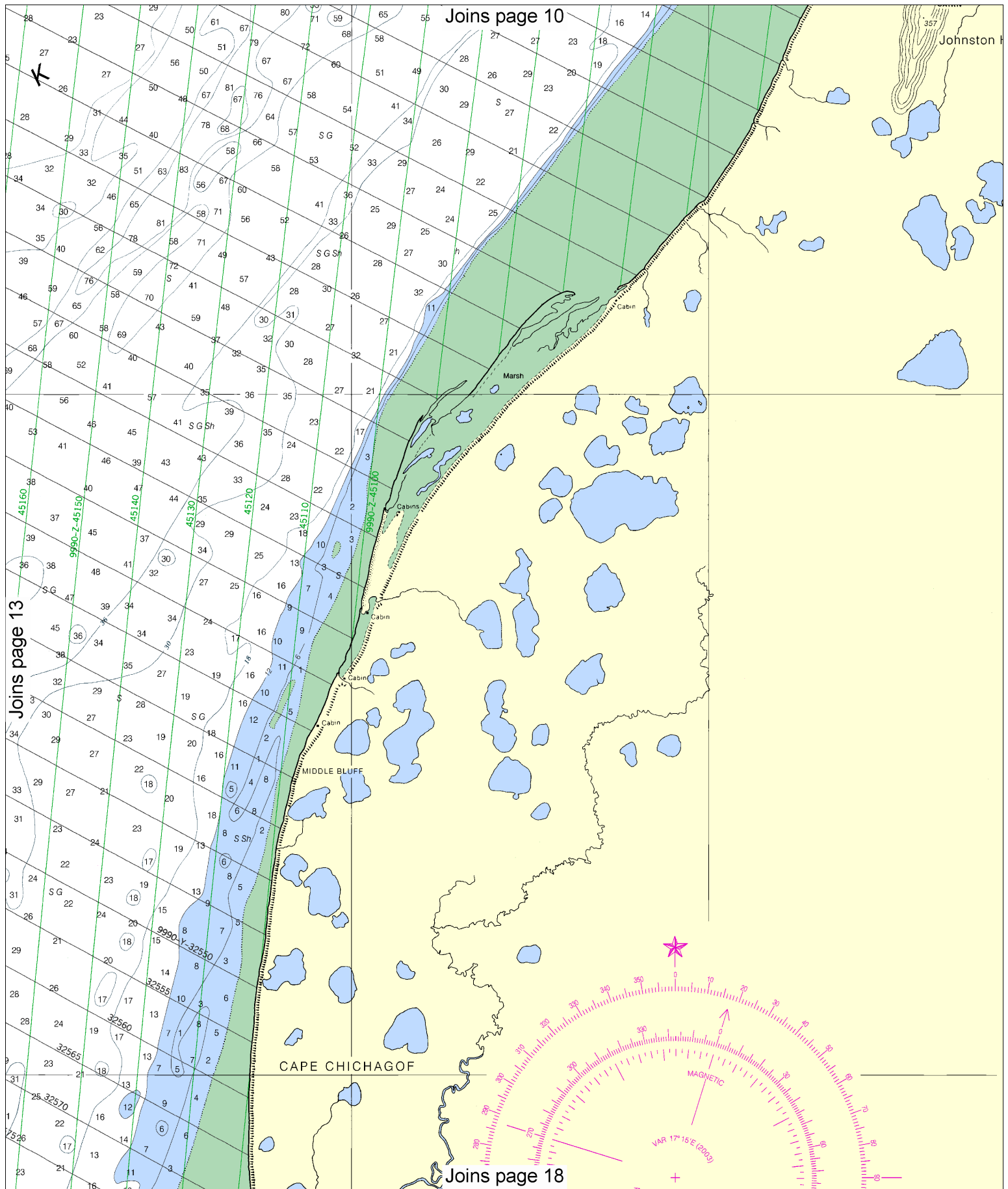
See Note on page 5.











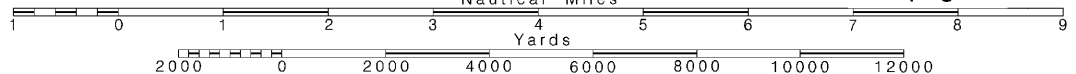
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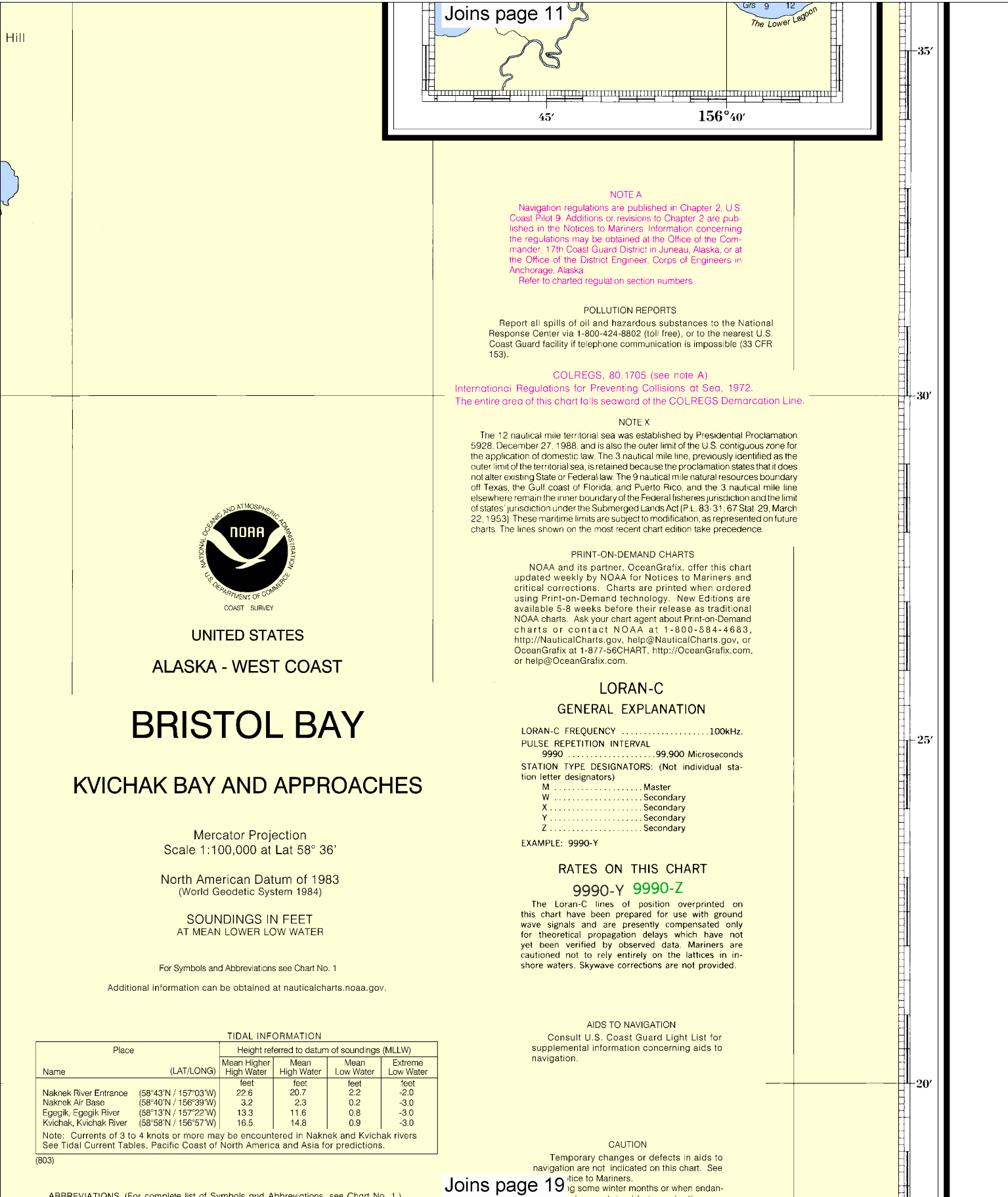
Note: Chart grid lines are aligned with true north.

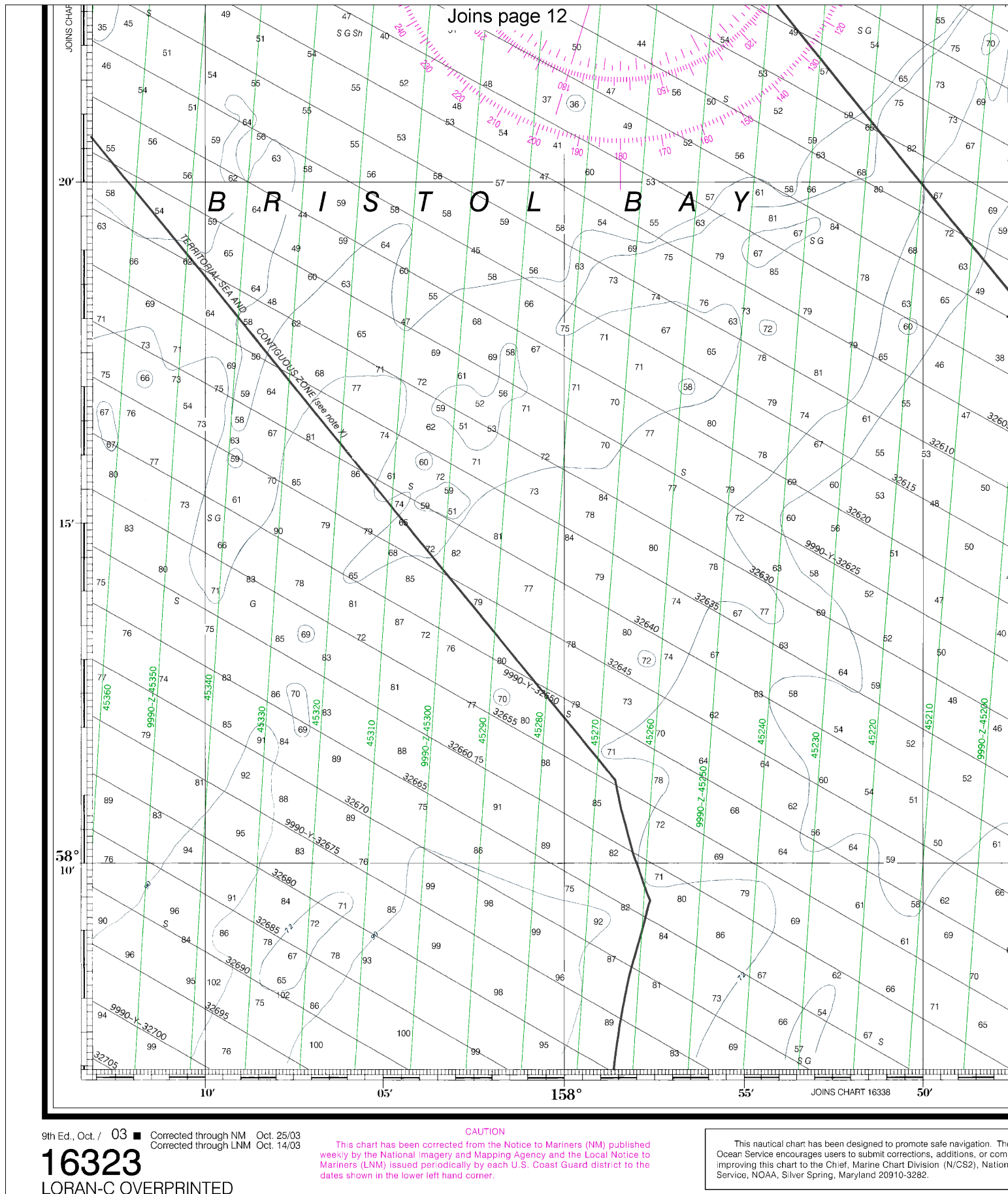
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SCALE 1:100,000
Nautical Miles

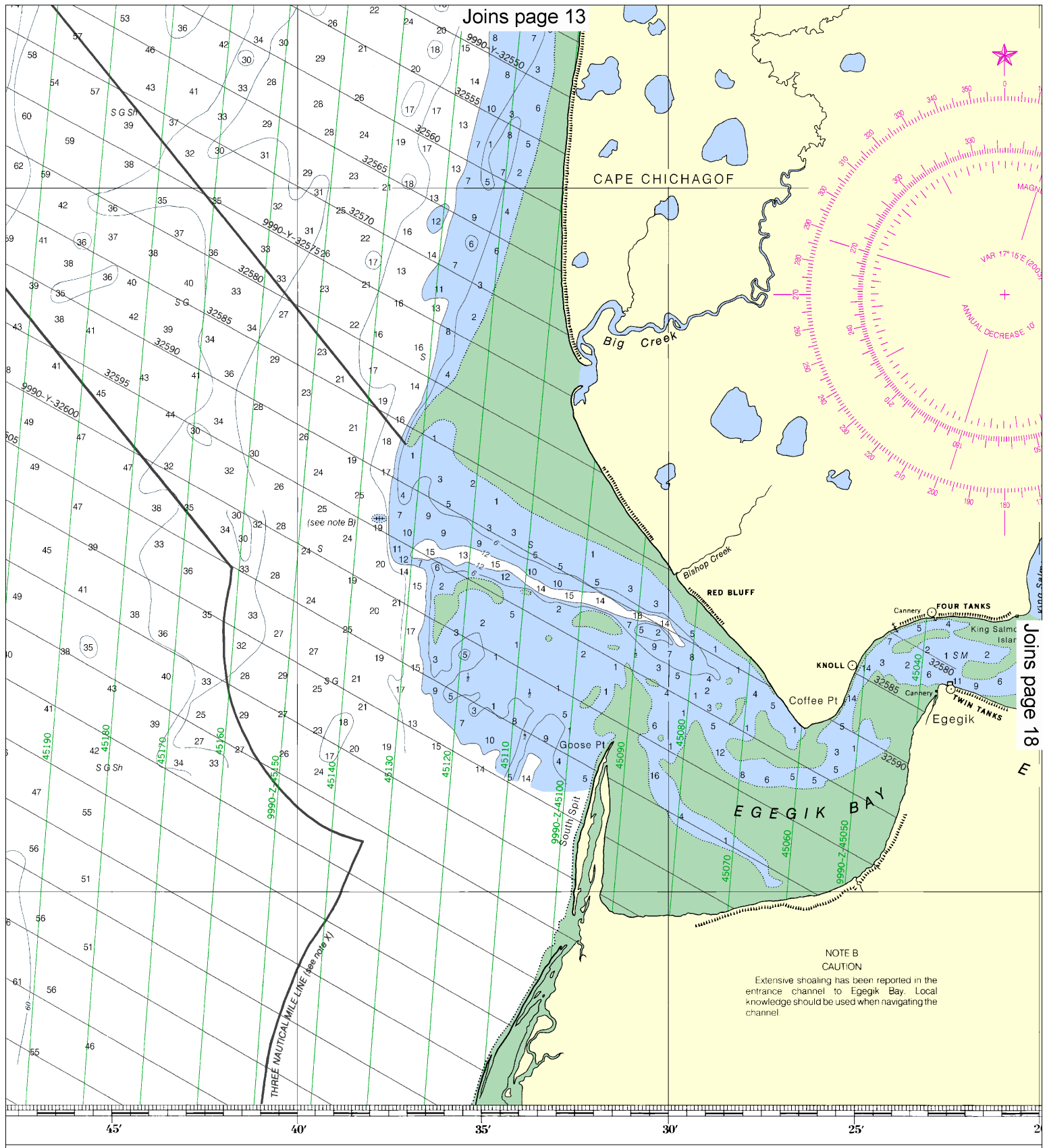
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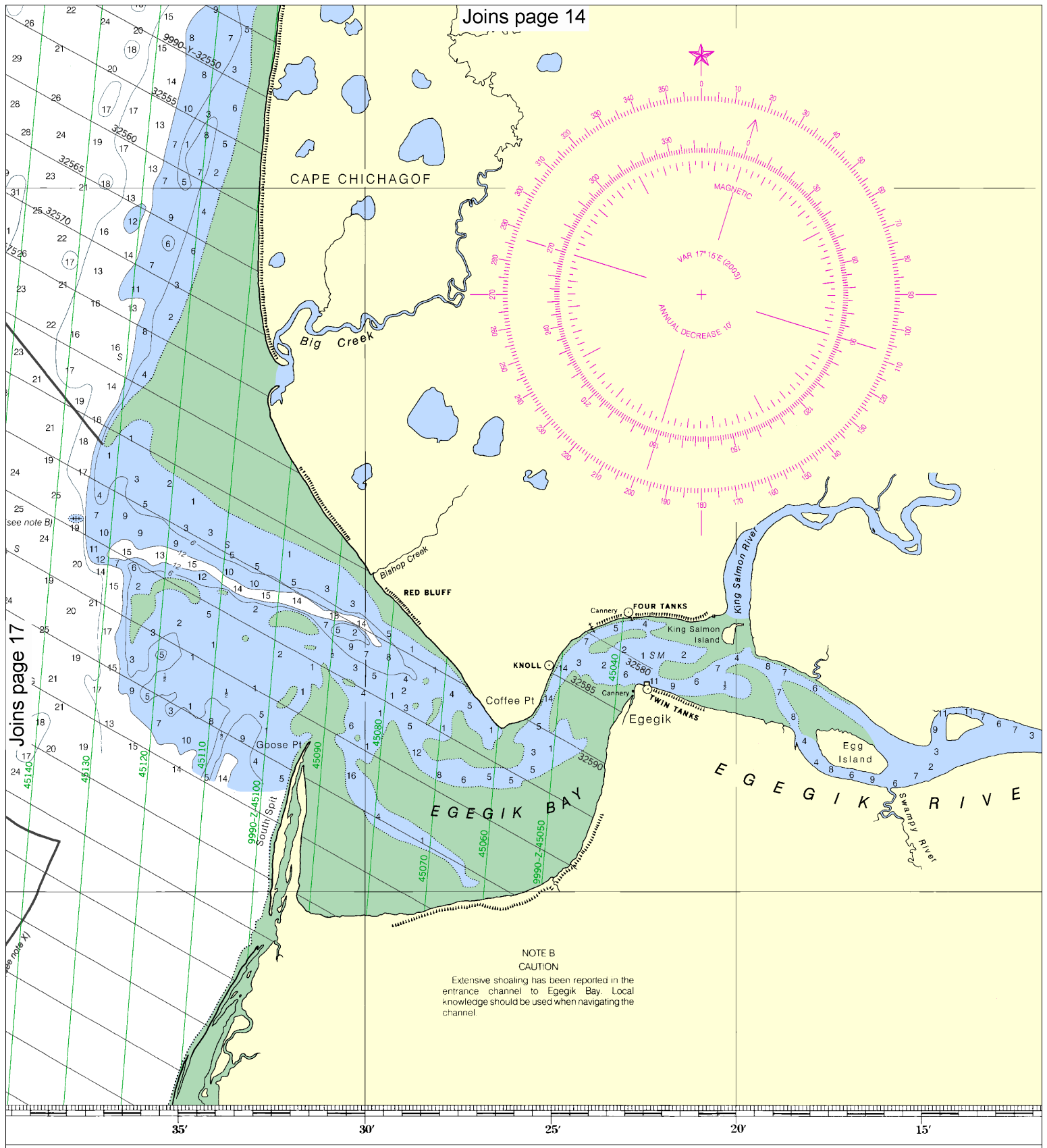
16



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SOUNDINGS IN FEET

Published at Washington, D.C.
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST SURVEY



Joins page 17

Joins page 14

see note X

see note B

NOTE B
CAUTION
Extensive shoaling has been reported in the entrance channel to Egegik Bay. Local knowledge should be used when navigating the channel.

IN FEET

Published at Washington, D.C.
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST SURVEY

FATHOMS	1	2
FEET	6	12
METERS	1	2

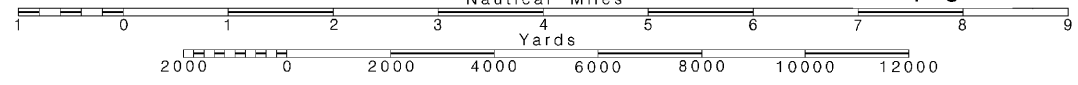
18

Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

SCALE 1:100,000
Nautical Miles

See Note on page 5.



SOUNDINGS IN FEET
AT MEAN LOWER LOW WATER

For Symbols and Abbreviations see Chart No. 1

Additional information can be obtained at nauticalcharts.noaa.gov.

Joins page 15 have been prepared for use with ground is and are presently compensated only for theoretical propagation delays which have not yet been verified by observed data. Mariners are cautioned not to rely entirely on the lattices in in-shore waters. Skywave corrections are not provided.

TIDAL INFORMATION

Place	(LAT/LONG)	Height referred to datum of soundings (MLLW)			
		Mean Higher High Water	Mean High Water	Mean Low Water	Extreme Low Water
Naknek River Entrance	(58°43'N / 157°03'W)	22.6	20.7	2.2	-2.0
Naknek Air Base	(58°40'N / 156°39'W)	3.2	2.3	0.2	-3.0
Egegik, Egegik River	(58°13'N / 157°22'W)	13.3	11.6	0.8	-3.0
Kvichak, Kvichak River	(58°58'N / 156°57'W)	16.5	14.8	0.9	-3.0

Note: Currents of 3 to 4 knots or more may be encountered in Naknek and Kvichak rivers. See Tidal Current Tables, Pacific Coast of North America and Asia for predictions.

(803)

ABBREVIATIONS (For complete list of Symbols and Abbreviations, see Chart No. 1.)

Aids to Navigation (lights are white unless otherwise indicated):

AERO, aeronautical	G green	Mo, morse code	R TR radio tower
Al alternating	Gp group	N nun	Rat rotating
B black	(Q interrupted quick	OBSC obscured	s seconds
Bn beacon	iso isophase (E Int)	Oc occulting	SEC sector
C can	LT, HO lighthouse	Or orange	St M statute miles
DIA diaphane	M nautical mile	Q quick	VQ very quick
E Int equal interval (Iso)	m minutes	R red	W white
F fixed	MICRO TR microwave tower	Ra Ref radar reflector	WHIS whistle
Fl flashing	Mkr marker	R Bn radiobeacon	Y yellow

Bottom characteristics:

Blds boulders	Co coral	gy gray	Oys oysters	so soft
bk broken	G gravel	n hard	Rk rock	Sh shells
Cy clay	Grs grass	M mud	S sand	sy sticky

Miscellaneous:

AUTH authorized	Obstn obstruction	PD position doubtful	Subm submerged
ED existence doubtful	PA position approximate	Rep reported	
(1) Wreck, rock, obstruction, or shoal swept clear to the depth indicated.			
(2) Rocks that cover and uncover, with heights in feet above datum of soundings.			
COLREGS: International Regulations for Preventing Collisions at Sea, 1972.			

HEIGHTS

Heights in feet above Mean High Water.

AUTHORITIES

Hydrography and topography by the National Ocean Service, Coast and Geodetic Survey with additional data from the Corps of Engineers, Geological Survey, and U.S. Coast Guard.

SUPPLEMENTAL INFORMATION

Consult U.S. Coast Pilot 9 for important supplemental information.

HORIZONTAL DATUM

The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 2.637" southward and 7.717" westward to agree with this chart.

AIDS TO NAVIGATION

Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.

CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

During some winter months or when endangered by ice, certain aids to navigation are replaced by other types or removed. For details see U.S. Coast Guard Light List.

Underlined figures on the areas which uncover express the heights in feet above datum of the soundings.

RADAR REFLECTORS

Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

WARNING

The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

CAUTION

Limitations on the use of radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Imagery and Mapping Agency Publication 117.

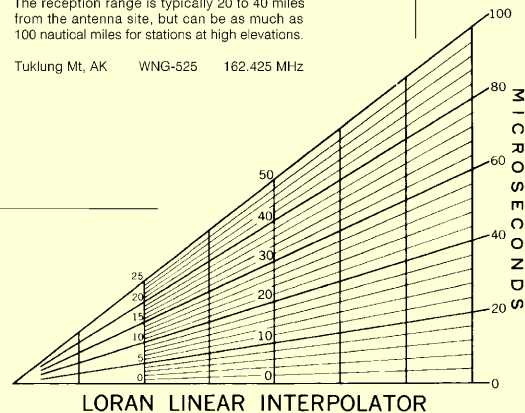
Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.

Station positions are shown thus:
○ (Accurate location) ◦ (Approximate location)

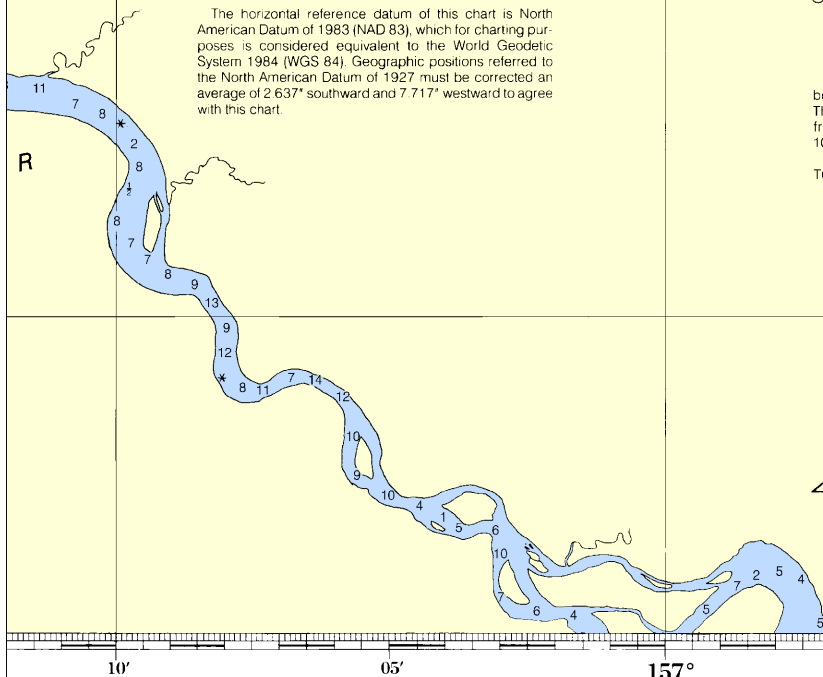
NOAA WEATHER RADIO BROADCASTS

The National Weather Service station listed below provides continuous weather broadcasts. The reception range is typically 20 to 40 miles from the antenna site, but can be as much as 100 nautical miles for stations at high elevations.

Tuklung Mt, AK WNG-525 162.425 MHz



LORAN LINEAR INTERPOLATOR



Bristol Bay - Kvichak Bay and Approaches
SOUNDINGS IN FEET - SCALE 1:100,000

16323
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EMERGENCY INFORMATION

VHF Marine Radio channels for use on the waterways:

Channel 6 – Inter-ship safety communications.

Channel 9 – Communications between boats and ship-to-coast.

Channel 13 – Navigation purposes at bridges, locks, and harbors.

Channel 16 – Emergency, distress and safety calls to Coast Guard and others, and to initiate calls to other

vessels. Contact the other vessel, agree to another channel, and then switch.

Channel 22A – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here.

Channels 68, 69, 71, 72 and 78A – Recreational boat channels.

Getting and Giving Help — Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.

Distress Call Procedures

- Make sure radio is on.
- Select Channel 16.
- Press/Hold the transmit button.
- Clearly say: "MAYDAY, MAYDAY, MAYDAY."
- Also give: Vessel Name and/or Description; Position and/or Location; Nature of Emergency; Number of People on Board.
- Release transmit button.
- Wait for 10 seconds — If no response Repeat MAYDAY call.

HAVE ALL PERSONS PUT ON LIFE JACKETS!



NOAA Weather Radio All Hazards (NWR) is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service office. NWR broadcasts official Weather Service warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week.

<http://www.nws.noaa.gov/nwr/>

Quick References

Nautical chart related products and information	—	http://www.nauticalcharts.noaa.gov
Online chart viewer	—	http://www.nauticalcharts.noaa.gov/mcd/NOAAChartViewer.html
Report a chart discrepancy	—	http://ocsddata.ncd.noaa.gov/idrs/discrepancy.aspx
Chart and chart related inquiries and comments	—	http://ocsddata.ncd.noaa.gov/idrs/inquiry.aspx?frompage=ContactUs
Chart updates (LNM and NM corrections)	—	http://www.nauticalcharts.noaa.gov/mcd/updates/LNM_NM.html
Coast Pilot online	—	http://www.nauticalcharts.noaa.gov/nsd/cpdownload.htm
Tides and Currents	—	http://tidesandcurrents.noaa.gov
Marine Forecasts	—	http://www.nws.noaa.gov/om/marine/home.htm
National Data Buoy Center	—	http://www.ndbc.noaa.gov/
NowCoast web portal for coastal conditions	—	http://www.nowcoast.noaa.gov/
National Weather Service	—	http://www.weather.gov/
National Hurricane Center	—	http://www.nhc.noaa.gov/
Pacific Tsunami Warning Center	—	http://ptwc.weather.gov/
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